

ABSTRACT OF THE DISCLOSURE

Method and device, including a uniquely operative applicator, and pharmaceutical compositions, for the controlled, non-surgical removal and retrieval of cells from a variety of skin lesions and tissue surfaces are disclosed. A synergistic effect of proteolytic digestion of the intracellular matrix and "stripping" flow is achieved by treating a defined area with a controlled, continuous stream of proteolytic enzyme solution, causing gentle but effective tissue erosion. Isolated cells from the skin lesion and/or tissue surface may be collected from the protease solution stream for histological analysis and/or cell culture, affording a method of "enzymatic biopsy". The protease solution may be supplemented with anesthetics, coagulants, anticoagulants and antibiotics to decrease the discomfort, erythema, bleeding, risk of infection and scarring traditionally associated with surgical treatment of skin lesions. Delivery of precise levels of catalytic activity is ensured by controlled activation of stable, inactivated enzyme stock solutions and powders shortly prior to application.